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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/992,051

11/21/2001

Kevin M. Ferguson

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06/15/2006

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EXAMINER

TRAN, TRANG U

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,051

Applicant(s)

FERGUSON, KEVIN M.

Examiner

Trang U. Tran

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 22, 2006 have been fully considered but they are not persuasive.

In re pages 4-5, applicant argues that claims 1, 3 and 5 are deemed to be allowable as being neither anticipated nor rendered obvious to one of ordinary skill in the art by Sid-Ahmed because the up-sampling as claimed implies to one skilled in the art more than just frame rate doubling of Sid-Ahmed and Sid-Ahmed does not disclose an adaptive HVM filter, i.e., does not generate adaptive filter coefficients for each pixel processed based on a perceptual parameter such as local average luminance, contrast, etc. and human vision model filtering, as disclosed in the referenced U.S. Patent No. 6,907,143, implies filtering based on such perceptual parameters.

In response, the examiner respectfully disagrees. It is noted that claims 1, 3 and 5 recited "up-sampling the slower rate video signal to the desired rate". The claimed "up-sampling" does not exclude frame rate doubling of Sid-Ahmed and is more than just frame rate doubling of Sid-Ahmed. The claimed "up-sampling" can be frame rate doubling of Sid-Ahmed. Thus, the claimed "up-sampling" is anticipated by the frame rate doubling of Sid-Ahmed.

Specification and U.S. Patent No. 6,907,143 are not the measure of invention. Therefore, limitations contained therein can not be read into the claims for the purpose of avoiding the prior art. In re Sporck, 55 CCPA 743, 386 F.2d 924, 155 USPQ 687 (1968).

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Claims 1, 3 and 5 further recite “adaptively filtering the up-sampled slower rate video signal using a human visual model to produce the smooth interpolated video signal”. As discussed in the last Office Action, the claimed “adaptively filtering” is anticipated by the adaptive 3-D low pass digital filter 406 of Sid-Ahmed.

In re page 6, applicant argues, with respect to claims 2, 4 and 6, that the combination of Sid-Ahmed and Zhu does not produce the invention as recited in claims 2, 4 and 6 because Zhu merely indicates that horizontal scan lines may be repeated or replaced with a constant value – this has nothing to do with d.c. restoration as claimed.

In response, the examiner respectfully disagrees. As discussed in the last Office Action, the replacing of horizontal scan lines with a constant value of Zhu would anticipate the claimed d.c. restoration because constant value of Zhu is d.c. and replacing horizontal scan lines with a constant value would anticipate the d.c. restoration as claimed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 1, 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipate by Sid-Ahmed (US Patent No. 5,621,470).

In considering claim 1, Sid-Ahmed discloses all the claimed subject matter, note 1) the claimed means for up-sampling the slower rate video signal to the desired rate is met by the two video memory arrays (VRAM's) 400 and 401 which each pixel is read twice and each horizontal line is read twice and the whole frame is read at twice the frame rate at which image was written (Figs. 2-4, col. 2, line 64 to col. 5, line 19), and 2) the claimed means for adaptively filtering the up-sampled slower rate video signal using a human visual model to produce the smooth interpolated video signal is met by the 3-D low pass digital filter 406 which provide a flicker free image display (Figs. 2-4, col. 2, line 64 to col. 5, line 19).

Claim 3 is rejected for the same reason as discussed in claim 1.

Claim 5 is rejected for the same reason as discussed in claim 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sid-Ahmed (US Patent No. 5,621,470) in view of Zhu et al. (US Patent No. 6,069,664).

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In considering claim 2, Sid-Ahmed discloses all the limitations of the instant invention as discussed in claim 1 above, except for providing the claimed further comprising means for restoring a direct current level for the smooth interpolated video signal. Zhu et al teach that the PTI converter 10 and ITP converter 20 provide the restoration of the full vertical resolution corresponding to a progressive video signal from a conventional interlaced video source produced by any progressive film scanner or other similar device where at least one of the horizontal scan lines have been repeated or replaced with a constant value (Fig. 1, col. 8, lines 20-56). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the restoration of the full vertical resolution as taught by Zhu et al into Sid-Ahmed's system in order to preserve the vertical resolution of a progressive film scan system and maintains (NTSC) interlaced video signal output for backward compatibility with existing recording equipment and standard video interfaces in the broadcasting and consumer electronics industry.

Claim 4 is rejected for the same reason as discussed in claim 2.

Claim 6 is rejected for the same reason as discussed in claim 2.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory

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action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT
June 08, 2006



Trang U. Tran
Examiner
Art Unit 2622